

**Notice of Allowability**

Application No.

10/021,520

Examiner

Melissa M. Chojnacki

Applicant(s)

ZUZARTE, CALISTO PAUL

Art Unit

2164

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 29-June-2006.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### Remarks

1. In response to the Amendment filed on June 29, 2006, claims 1-23 are presently pending in the application.

### *Allowable Subject Matter*

2. Claims 1-23 are allowed over prior art made of record.

3. The following is an examiner's statement of reasons for allowance:

The Appellants' arguments in the Appeal Brief filed on April 15, 2005, have been fully considered and are found persuasive.

The prior art of record Ziauddin (U.S. Patent No. 6,029,163), in view of Schiefer et al. (U.S. Patent No. 5,761,653), does not teach, disclose or suggest:

A method, for use in query optimization in a relational database management system in a computer system comprising of deriving a statistical soft constraint from the statistical information that reflects a statistical property of the data, wherein the statistical soft constraint comprises a value that reflects the percentage of the rows for which an expression can be true, as claimed in independent claim 1.

Claims 2-8 are allowed because they are dependent on independent claim 1.

A method, for use in query optimization in a relational database management system in a computer system comprising of deriving a statistical soft constraint from the statistical information that reflects a statistical property of the data, wherein the statistical soft constraint comprises a constraint predicate and an associated probability value, the associated probability value reflecting the percentage of rows of the one or more columns for which the constraint predicate is true, as claimed in independent claim 9.

Claims 10-15 are allowed because they are dependent on independent claim 9.

A database management system in a computer system comprising means for generating a statistical soft constraint using the statistical information, wherein the statistical soft constraint comprises a constraint predicate and an associated probability value, the associated probability value reflecting the percentage of rows of the one or more columns for which the constraint predicate is true, as claimed in independent claim 16.

Claims 17-20 are allowed because they are dependent on independent claim 16.

A computer program product comprising deriving a statistical soft constraint from the statistical information that reflects a statistical property of the data, wherein the statistical soft constraint comprises a value that reflects the percentage of rows for which an expression can be expected to be true, as claimed in independent claim 21.

Claim 22 is allowed because they are dependent on independent claim 21.

A computer readable medium containing program instructions for use in query optimization in a relational database management system, the program instructions for deriving a statistical soft constraint from the statistical information that reflects a statistical property of the data, wherein statistical soft constraint comprises a value that reflects the percentage of the rows for which an expression can be true, as claimed in independent claim 23.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mellissa M. Chojnacki whose telephone number is (571) 272-4076. The examiner can normally be reached on 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2164

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 1, 2006  
MMC

  
**SAM RIMELL**  
PRIMARY EXAMINER